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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,147	08/02/2001	Harold L. Mantius	00414-063001	6421

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EXAMINER

PRATT, HELEN F

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 06/24/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/921,147

Applicant(s)

MANTIUS ET AL.

Examiner

Helen F. Pratt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 15 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 41-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 41-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 41-61 are objected to because of the following informalities: In claims 41 and 50, step "e", line 1, there should be a - to - inserted after "stream".

In claim 59, line 3, "ration" should be - ratio - .

In claim 60, line 3, "ration" should be - ratio - .

Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 41-58, 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black (5,403,604) in view of Japanese Laid-Open Patent application No. 18971 found in Puri (4,439,458), col. 3, lines 16-30) or Puri taken alone in view of Dechow.

Black '458 discloses a process of removing sugar from juices using a nanofiltration membrane to make a high and low sugar containing juice fraction (abstract). The reference discloses that the acid content of both fractions can be 0.8%, but can be lower or higher if desired by employing a NF membrane, which controls the acid permeability according to the desired result (col. 4, lines 56-64). The reference also discloses combining juice streams from ultrafiltration and nanofiltration which have the sugar removed (col. 7, lines 16-20). Claims 41 and 45 differ from the reference in the step of combining the acid-reduced juice stream with a second juice stream to make

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an acids reduced fruit juice. However, the reference discloses that it is known to add the high Brix/acid ratio juice fraction to juices to modify the Brix/acid ratio to desired levels (col. 5, lines 15-20). Also, Puri, Japanese Laid Open Patent Application No. 18971, mixing an acid removed fruit juice with a nonacid removed fruit juice having insoluble solids content of more than 0.5% in an adequate amount. Puri '458 discloses that it is known to deacidify fruit juice before or after debittering the juice (col. 3, lines 30-40). Pulp free citrus juice is debittered, and then can be combined with an untreated juice and packaged as a liquid, or dry powder (col. 5, lines 65-69 and col. 6, lines 1-24). Dechow et al. disclose a method of treating fruit or vegetable juice by passing it through a bed to remove acids. The treated product can be blended with untreated juice (abstract). Claim 41 also requires that the acid-enriched juice fraction (AEJF) be combined with a portion of the fruit juice. As it is known to remove acid from fruit juice and to combine it with another fruit juice, it would have been obvious to use the acid enriched juice with the opposite, i. e. juices needing an acid taste, just as it is known to increase the acidity of for instance apple pie, by adding lemon juice. Puri also discloses that it is known to blend treated juices with untreated juices to attain a controlled, constant level of bitterness in a final product (col. 6, lines 15-22). The juices as above would have had some acid removed. Therefore, it would have been obvious to add treated juice to a juice stream to make a high acid or low acid enriched fruit juice product in the process of Black et al. because the secondary references disclose that it is known to blend low acid juices with other juices, and Brown discloses that it is known

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to control the amount of acid in a juice stream by using an NF membrane which controls the acid permeability to give a desired result.

Claim 43 requires concentrating the ARFJ and claim 42 requires concentrating an enriched FJ. Puri discloses concentrating the fruit juice before processing (col. 10, and 19-24, and lines 66-70). Even though the juice is not concentrated after removing the acids portion or enriched with the acid portion, no patentable distinction is seen at this time in concentrating after the acid has been removed or concentrating after the juice has been acid enriched, absent any specific limitations as to how the acidic compounds are removed. Also, Black et al. disclose that it is known to concentrate the juice streams (col. 4, lines 23-26). As it is known to concentrate the ARFJ, it would have been also obvious to concentrate the AEFJ for the same function of reducing the amount of juice being processed.

Claim 44 requires that the juice is cranberry juice. However, Dechow et al. is to treating fruits and vegetables and Puri to citrus juices. Nothing is seen that the juice of cranberries would have required a different treatment as other juices, as it contains acids, and sugars and pulp, and water and various processes for removing acids from juice streams are known. Therefore, it would have been obvious to treat cranberry juice to remove acids in either of the processes of Puri or Dechow et al. because they show how to remove the acids.

Claims 46 and 47 require that the acid-enriched and the acid-reduced streams be combined with a different juice to make a blended juice. Black, Jr. et al. disclose that the high B/A ratio juice can be used as a sugar/acid modifier which is blended with

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juices to modify the B/A ratio to desired levels or can be sold as a low acid fruit juice (col. 5, lines 15-20). This phrase "blended with juices" seems to impart that the juices can be other juices because the reference is already to separating a juice stream and then enriching parts of that juice stream, so there would have been no need to repeat modifying the juice stream as in claim 1. Therefore, it would have been obvious to add the enriched or reduced juice streams to other juice products as disclosed by Black et al.

Claims 48 and 49 are to trying the two juice streams separately. Black, Jr. et al. disclose that the stream can be concentrated by freeze concentration and evaporation, which amounts to drying the juice streams (col. 4, lines 24-25) Nothing is seen that the acid reduced juice streams could not also be dried, as the basic difference is in employing a NF membrane which controls the acid permeability, which is a step contemplated in treating the finished orange juice (col. 4, lines 60-64). Therefore, it would have been obvious to dry either to the two juice streams.

The limitations of claims 56-58, have been discussed above and are obvious for those reasons, except that vegetable juice is used instead of a fruit juice. However, the line between vegetables and fruits is very fine, and no patentable distinction is seen at this time between the use of one of the other as they both basically contain the same constituents. Therefore, it would have been obvious to use fruits or vegetables in the process of the combined references.

Claim 61 requires that the weight fraction in the various fruit juices is not the same. However, it would have been within the skill of the ordinary worker to divide the

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various juice streams according to how much juice was needed to be treated in order to make the various products. Therefore, it would have been obvious to use various weight fractions to make a juice.

Claims 59 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over the above combined references as applied to claims 41-58 above, and further in view of Mantius et al. 2002/0197380A1.

Claims 59 and 60 further require that the various streams be made by passing the juice through a ratio divert mechanism. However, no weight is given to apparatus limitations in a process claim. The reference disclose various streams which have been divided for further treatment. Mantius discloses a process of producing sugars and acids rich juice using a divert mechanism (abstract and page 2, para. 0018). Therefore, it would have been obvious to use a divert mechanism in the process of the combined references for the function of dividing juice into various streams.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Helen F. Pratt at telephone number 703-308-1978.

Hp 6-17-03

H F Pratt
HELEN PRATT
PRIMARY EXAMINER